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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/509,548	04/12/2000	KARL SIEMENSMEYER	0524-3264-0-	5297

7590 11/20/2002

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EXAMINER

BISSETT, MELANIE D

ART UNIT	PAPER NUMBER
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1711

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DATE MAILED: 11/20/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/509,548	Applicant(s) SIEMENSMEYER ET AL.	
	Examiner Melanie D. Bissett	Art Unit 1711	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 August 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 14-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 14-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: |

DETAILED ACTION

1. The rejections based on 35 USC 102 and 103 have been maintained.

Claim Rejections - 35 USC § 102

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
3. Claims 14 and 16-21, and 23-27 are rejected under 35 U.S.C. 102(b) as being anticipated by Nippon Sheet Glass Co., Ltd.
4. From a prior Office action:
 4. The reference teaches a heat-reflecting glass for use in window glasses for buildings or houses [0002], where the glass is a multicomponent coating system comprising a cholesteric liquid crystal polymer film coating (Figure 4). Since the reference teaches the use of the inventive glass structures for window structures, it is the examiner's position that the coated glass could also be used in automotive applications as heat-reflecting windows. Also, since Figure 4 shows the coating as a laminate layer between two substrates, the coating inherently possesses adhesive properties and therefore represents an adhesive layer.
 5. Figure 1 shows a multi-layered cholesteric coating, where each layer reflects >40% of radiation in wavelength ranges above 750 nm. Each layer of the cholesteric coating has a different reflection maximum. Figures 2 and 4 show laminates reflecting an average >40% of radiation between 750 nm and 2000 nm. Since the graphs show a majority of reflection above 75%, it is the examiner's position that the reference suggests reflection of at least 75% of incident radiation above 750 nm.
 6. The reference describes laminates made by layering cholesteric liquid crystals having opposite spiral axes and by inserting a $\lambda/2$ sheet between two cholesteric films having the same direction of spiral axis. Films can be made by quenching a cholesteric polymer, thus teaching the freezing of a cholesteric phase by rapid cooling below T_g [0012].

5. Claim 22 is rejected under 35 U.S.C. 102(b) as being anticipated by Nippon Sheet Glass Co., Ltd. as evidenced by Armstrong World (GB 2132623A).

6. From a prior Office action:

8. Further, the reference teaches forming films by photopolymerizing a composition containing a photoinitiator, a photoreactive polyfunctional monomer, and a cholesterol derivative monomer by the teaching of Japan Kokai 59-109505 [0012]. An English equivalent, Armstrong World, teaches a method of applying the composition between glass substrates, adjusting the temperature, and irradiating the film to photopolymerize the coating. Since Nippon Sheet Glass Co., Ltd. teaches films obtained as shown by the Japanese reference, the English equivalent is incorporated within, and the reference teaches the process of applying the composition to a transparent substrate and curing the coating.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claim 15 is rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Nippon Sheet Glass Co., Ltd.

9. From a prior Office action:

10. Nippon Sheet Glass Co., Ltd. applies as above, teaching the compositions as transmitting at least about 70% of visible light between 400 and 750 nm [0007]. However, the reference does not show the coatings transmitting at least 80% of visible light.

11. It is the examiner's position that, because the reference discloses all the limitations of the claims except the properties of the visible light transmission, the examiner cannot determine whether or not the reference inherently possesses properties which anticipate or render the claimed invention obvious. Therefore, it is appropriate for the examiner to make a rejection under

both the applicable section of 35 USC 102 and 35 USC 103 such that the burden is placed upon the applicant to provide clear evidence that the respective compositions do in fact differ. *In re Fitzgerald et al.*, 205 USPQ 594.

12. Because the reference teaches the use of multiple cholesteric layers similar to those of the applicant's examples having high visible light transmission, where the cholesteric film possesses high reflection in the infrared wavelength range, it is the examiner's position that the films formed by the reference would inherently possess the applicant's claimed visible light transmission.

13. In the alternative, the reference teaches the combination of several layers of cholesteric materials, where the radiation reflection and transmission properties vary with the different layers. It is the examiner's position that it would have been prima facie obvious to form a film transmitting at least 80% of visible light to optimize the lighting conditions on the inside of a window formed with the films.

Response to Arguments

10. Applicant's arguments filed 8/29/02 have been fully considered but they are not persuasive.

11. In response to the applicant's arguments that the reference does not show layers having reflection values above 40%, it is noted that Figure 1 of the reference clearly demonstrates each layer reflecting at least 75% of the incident light in radiation ranges above 750 nm. Regarding the applicant's statement that it is well known in the art that specific cholesteric layers cannot reflect more than 50% of incident radiation, it is noted that the applicant has not provided support for such knowledge. The applicant also has not pointed to support from the reference to indicate that the inventors must have used light of a specific handedness in the experiments yielding the data of Figure 1.

Regardless, it is noted that the claims do not exclude measurements using such light, since the incident light would come from the provided source. It is noted that the reference also teaches the use of $\lambda/2$ films to increase the reflectivity of the layers [0010].

12. Regarding the applicant's arguments that the mid-peak width values of the reference differ from those of the presently claimed invention, it is noted that the claims do not limit such properties of the films.

Conclusion

13. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melanie D. Bissett whose telephone number is (703) 308-6539. The examiner can normally be reached on M-F 8-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on (703) 308-2462. The fax phone numbers for the organization where this application or proceeding is assigned are (703)

Application/Control Number: 09/509,548
Art Unit: 1711

Page 6

872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

mdb
November 18, 2002



James J. Seidleck
Supervisory Patent Examiner
Technology Center 1700